

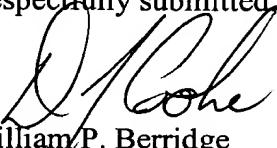
Applicants' invention comprises a priming device for firing a detonator comprising at least an electrical power supply and a power generating means for generating, through resistors, a current intensity sufficient to actuate the firing element. The resistors regulate the current intensity such that undesirable or unexpected firing of the firing element is avoided even when the transistors or electromechanical assembly downstream of the resistors fail. As a result, misfiring is rendered unlikely, and safer more reliable firing of the firing element may be achieved even when an operator error has occurred during programming of a firing delay. See, for example, the specification at page 5, lines 17-21.

Beukes discloses a detonator 10 using an electronic explosive initiating device 12 wherein the device is fired once a designated low-voltage threshold is surpassed (col. 4, lines 24-33). Beukes however fails to teach, disclose or suggest the use of resistors in all circuits between the priming device and the detonator as in the claimed invention. Thus Beukes is susceptible to misfires when, for example, countermeasure EMP or radioactive beams exist, whereas Applicants' invention is not. Accordingly as Beukes fails to teach, disclose or suggest the combination of features claimed or advantages of Applicants' invention, withdrawal of the rejection of claims 14-19 and 22-29 on the basis of Beukes as maintained in the Advisory Action is respectfully requested.

Reconsideration of the application is respectfully requested. Applicants submit that the claims presented in view of the Remarks made herein patentably distinguish over the art applied and pose no 35 U.S.C. §112 issues. Accordingly, allowance of claims 14-29 is respectfully requested.

Should the Examiner determine that anything further is desirable to place the application in even better form for allowance, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

Respectfully submitted



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Attachment:
Appendix

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DEPOSIT ACCOUNT USE
AUTHORIZATION
Please grant any extension
necessary for entry;
Charge any fee due to our
Deposit Account No. 15-0461

APPENDIX

Changes to Claims:

The following is a marked-up version of the amended claims:

14. ~~(Twice-Three Times Amended)~~ A priming device for a detonator, comprising:
timing means for timing the action of a firing element of a primer;
an electrical power supply that provides a first power intensity to the timing
means; and

power generating means, ~~the power generating means~~ for generating, through
a resistive circuit and charged capacitor, a second power intensity sufficient to actuate the
firing element upon expiration of a timing interval, wherein the timing means and power
generating means have resistors limiting the current intensity, the first power intensity from
the power supply not being sufficient, even as other components fail, to actuate the firing
element.

16. ~~(Twice Amended)~~ A priming device for a detonator, comprising:
an electrical power supply means for timing the action of a firing element of a
primer; and

power generating means for generating, through a resistive circuit having
resistors limiting current intensity, a current intensity sufficient to actuate the firing element
upon expiration of a timing interval, the power generating means comprising a capacitor,
switching means, and controlling means for controlling the switching means by allowing the
capacitor to be charged for a charging time during the timing interval and then discharged,
the discharge causing the firing element to act on the primer.